Claims:

1. A method for performing discontinuous transmission (DTX) in a communications system in which source data is interleaved for transmission from a first component in the system to a second component in the system, the method comprising the steps of:

detecting periods of source data inactivity; and

transmitting silence descriptor (SID) frames from the first to the second component during the periods of source data inactivity,

wherein certain of the transmitted SID frames are interleaved using a different interleaving algorithm as compared to that used for source data.

2. The method of claim 1, wherein source data is block diagonally interleaved, and wherein certain of the SID frames are block interleaved.

3. The method of claim 1, wherein the SID frames include comfort noise (CN) parameters.

4. The method of claim 1, including the steps of:

transmitting a first type of SID frame to indicate a transition from source data activity to source data inactivity;

periodically transmitting a second type of SID frame during source data inactivity; and

transmitting a third type of SID frame to indicate a transition from source data inactivity to source data activity.

5. The method of claim 1, wherein the communications system is an adaptive multi-rate (AMR) system, and wherein SID frames include codec mode information in addition to silence description information.

6. The method of claim 1, wherein each SID frame includes a bit pattern to distinguish the SID frame from source data frames.

7. The method of claim 6, wherein the bit patterns are gross bit patterns.

8. The method of claim 1, wherein the source data is speech, and wherein the communications system is one of a Time Division Multiple Access (TDMA) wireless system, a Frequency Division Multiple Access (FDMA) wireless system, and a Code Division Multiple Access (CDMA) wireless system.

9. The method of claim 1, wherein escape frames are transmitted to effect configuration changes, and wherein an escape frame can replace a source data frame, a SID frame, or a no-transmission (NoTX) frame.

10. The method of claim 9, wherein SID frames are block interleaved, and wherein escape frames are block diagonally interleaved.

11. The method of claim 9, wherein the communications system is an adaptive multi-rate (AMR) system, and wherein an escape frame is used to change a codec mode set.

12. The method of claim 9, wherein the communications system is an adaptive multi-rate (AMR) system, and wherein an escape frame is used to change a phase of codec information.

13. The method of claim 1, wherein active speech source data is block diagonally interleaved, and wherein unused bits within the interleaving scheme for a last speech frame are used for a specific bit pattern to mark end of speech, and wherein unused bits within the interleaving scheme for a first frame are used for a specific bit pattern to mark beginning of speech.

14. In a speech communications system in which speech data is transmitted from a first component to a second component, a method for transmitting protocol messages to the second component, comprising the step of:

transmitting an escape frame in place of a speech data frame, the escape frame including a gross bit pattern to distinguish the escape frame from speech data frames and conveying a protocol message.

15. The method of claim 14, wherein the escape frame further includes a data field to indicate to the second component a particular protocol message.

16. In a communications system in which speech data is transmitted from a first component to a second component, a method for effecting configuration changes, comprising the step of:

transmitting an escape frame in place of a speech data frame, the escape frame including a gross bit pattern to distinguish the escape frame from speech data frames and conveying a configuration change indication.

17. The method of claim 16, wherein the escape frame further includes a data field to indicate to the second component a particular configuration change to be made.

18. The method of claim 16, wherein the communications system is an adaptive multi-rate (AMR) system, and wherein an escape frame is used to change a codec mode set.

19. The method of claim 16, wherein the communications system is an adaptive multi-rate (AMR) system, and wherein an escape frame is used to change a phase of codec information.

20. The method of claim 16, further comprising the step of:

transmitting silence descriptor (SID) frames from the first to the second component during periods of source data inactivity,

wherein an escape frame can replace a source data frame, a SID frame, or a no transmission (NoTX) frame.

21. The method of claim 20, wherein the SID frames include comfort noise (CN) parameters.

22. The method of claim 20, wherein source data frames and escape frames are block diagonally interleaved, and wherein certain of the transmitted SID frames are block interleaved.

23. The method of claim 20, including the steps of:

transmitting a first type of SID frame to indicate a transition from source data activity to source data inactivity;

periodically transmitting a second type of SID frame during source data inactivity; and

transmitting a third type of SID frame to indicate a transition from source data inactivity to source data activity.

24. The method of claim 20, wherein the communications system is an adaptive multi-rate (AMR) system, and wherein SID frames include codec mode information in addition to silence description information.

25. A speech communications system, comprising:

a first component transmitting interleaved speech data frames; and

a second component receiving the interleaved speech data frames,

wherein the first component detects periods of speech inactivity and transmits silence descriptor (SID) frames instead of speech data frames during the periods of speech inactivity, and

wherein at least some of the SID frames are interleaved using a different interleaving algorithm as compared to that used for speech frames.

26. The method of claim 25, wherein speech frames are block diagonally interleaved, and wherein certain SID frames are block interleaved.

27. A communications system, comprising:

a first component transmitting source data; and

a second component receiving the source data,

wherein the first component transmits an escape frame in place of a source data frame to indicate a configuration change to the second component, and

wherein the escape frame includes a gross bit pattern to distinguish the escape frame from source data frames.

28. The method of claim 27, wherein the escape frame further includes a data field to indicate to the second component a particular configuration change to be made.